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			ART UNIT	PAPER NUMBER
			2616	
			NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/072,055

Applicant(s)

BHALLA ET AL.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☒ Claim(s) 2-7, 10-14 and 33-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 2-7 and 10-14 are objected to because of the following informalities: in line 1 of each of these claims "The method of" should be "The computer-readable medium of".

Appropriate correction is required.

3. Claims 33-38 are objected to because of the following informalities: in line 1 of each of these claims "The logic of" should be "The computer-readable medium of". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harper et al. (USPN 6,985,464), of record, in view of Dynarski et al. (USPN 6,628,671), of record, in further view of Madour (US 2003/0053431), of record.
6. Regarding claims 1, 9, 16, 26, 33, and 40, Harper discloses a computer-readable medium encoded with a data structure operable to perform the following: communicating, by a packet data serving node, with a current packet controller function through a tunnel (col. 3, lines 33-35,

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where the connection between the PCF and the PDSN is known as “a GRE tunnel”), the current packet controller function operating as a packet switch that provides a circuit service between the packet data serving node and a base station controller (Fig. 3 and col. 3, lines 28-36, where it is implicit that the PCF operates as a packet switch that provides a circuit service between the PDSN and the BSC given that the interface between the PCF and the PDSN “implements protocol conversation between the wireless channel and the wire channel”), the tunnel enabling the current packet controller function and the packet data serving node to communicate over an Internet Protocol-based network (Fig. 3, where the IP network runs from the mobile through the PDSN, such that the GRE tunnel runs over IP), the current packet controller function serviced by the packet data serving node (col. 3, lines 28-35); receiving, through the tunnel, a registration request from a mobile node, the mobile node communicating with the current packet controller function (col. 5, lines 61-66, where the mobile registers with the network through the PCF and is assigned a PDSN, see also col. 6, lines 7-53); and determining, at the packet data serving node, whether the mobile node is serviced by a mobile Internet Protocol (col. 3, lines 37-44, where in Simple IP the PDSN must assign each new mobile node an IP address, and col. 3, line 56-col. 4, line 6, where in Mobile IP the PDSN does not have to assign each new mobile node an IP address, such that the PDSN would determine whether the mobile node is serviced by a mobile Internet Protocol to permit the PDSN to determine how to interact with the mobile node).

Harper does not expressly disclose determining, at the packet data serving node, whether the registration request comprises a previous access network identifier identifying a previous packet controller function; determining, at the packet data serving node, whether the mobile node communicated with a previous packet controller function serviced by the packet

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data serving node; and deciding, at the packet data serving node, whether to negotiate a point-to-point session for the mobile node in response to the determinations. But Harper does disclose that it is desirable in cdma2000 to keep a single PPP session when a mobile roams outside an area covered by a BSC or PCF (col. 5, lines 23-28). However, Harper does not apparently disclose how the PDSN identifies whether a current request relates to an existing PPP session when it receives a request from a new PCF. Dynarski teaches, in a system for activating PPP connections, receiving a registration request from a mobile node, the mobile node communicating with a current interface serviced by a network access server (col. 3, lines 22-27, where the network access server receives a new call set-up message, i.e. a registration request, from the communications device, i.e. the mobile node, where the mobile node communicates with a second port, i.e. interface, serviced by the network access server); determining, at the network access server, whether the registration request identifies a previous access network identifier identifying a previous interface (col. 3, lines 60-63, where the registration request is used to identify first port identifier, i.e. a previous access network identifier, identifying a previous interface, see also col. 3, lines 48-52); determining, at the network access server, whether the mobile node communicated with a previous interface serviced by the network access server (col. 3, lines 60-63, where the network access server determines if the mobile node communicated with one of its ports previously); and deciding, at the network access server, whether to negotiate a point-to-point session for the mobile node in response to the determinations (col. 3, lines 33-41, where if the mobile node previously communicated with the network access server then the PPP session is not renegotiated, and col. 4, lines 29-31, where if the mobile node did not previously communicate with the network access

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server then the PPP session is renegotiated), wherein the network access server comprises a memory operable to store a table, the table comprising an entry corresponding to a mobile node (col. 3, lines 63-col. 4, line 1, where the network access server stores a table containing an entry corresponding to a mobile node), the entry comprising: a mobile station identifier field operable to store a mobile station identifier and a previous access network identifier field operable to store a previous access network identifier (col. 3, line 63-col. 4, line 1, where the table maps ISMI/ESN numbers, i.e. a mobile station identifier, to a particular port, i.e. a previous access network identifier field operable to store a previous access network identifier, see also col. 3, lines 22-32, where the ports correspond to respective base stations, i.e. "access network"). Dynarski does this to allow a device to use an existing PPP set of parameters to avoid re-negotiation (col. 3, lines 33-41). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine, at the packet data serving node, whether the mobile node communicated with a previous packet controller function serviced by the packet data serving node; and to decide, at the packet data serving node, whether to negotiate a point-to-point session for the mobile node in response to the determinations to enable a PDSN to use an existing set of PPP parameters where possible.

Harper in view of Dynarski does not expressly disclose determining, at the packet data serving node, whether the registration request comprises a previous access network identifier identifying a previous packet controller function. However, Harper in view of Dynarski does disclose determining, at the packet data serving node, whether the mobile node communicated with a previous packet controller function (Dynarski: col. 3, lines 60-63, where the network access server determines if the mobile node communicated with one of its ports

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previously, and Harper: col. 3, lines 22-27, where the network access server is a PDSN and the port is a PCF, as outlined above). Madour teaches, in a cdma2000 system, that when a mobile station enters into a new radio access network, the serving PDSN will receive the RAN's packet zone identification (PZID), access network ID (system ID (SID)) and network ID (NID) (§ [0008]). Madour further teaches that the RAN corresponds to a BS, where the BS is connected to a PCF (§ [0005]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine, at the packet data serving node, whether the registration request comprises a previous access network identifier identifying a previous packet controller function to permit the PDSN to determine whether it contains a PPP connection for the mobile node in a manner that utilizes the signaling of the CDMA2000 network.

7. Regarding claims 2, 10, 17 and 27, Harper in view of Dynarski in further view of Madour discloses that the registration request comprises a request for service at the packet data serving node (Dynarski: col. 3, lines 22-27, where the new call set-up message, i.e. a registration request, requests service from the network access server, i.e. PDSN).

8. Regarding claims 3, 5, 11, 18, 20, 28, 30, 34, 36, and 41, Harper in view of Dynarski in further view of Madour discloses that deciding whether to negotiate the point-to-point session for the mobile node comprises: negotiating the point-to-point session if the mobile node did not communicate with a previous packet controller function serviced by the packet data serving node (Dynarski: col. 4, lines 29-31, where if the mobile node did not previously communicate with the network access server then the PPP session is negotiated); and updating the point-to-point session if the mobile node communicated with a previous packet controller function serviced by

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the packet data serving node (Dynarski: col. 3, lines 33-41, where if the mobile node previously communicated with the network access server then the PPP session is updated).

9. Regarding claims 4, 12, 19, 29, and 35, Harper in view of Dynarski in further view of Madour discloses that deciding whether to negotiate the point-to-point session for the mobile node comprises: determining whether there is a session context for the mobile node (Dynarski: col. 3, lines 33-41, where an network access server updates a PPP state); negotiating the point-to-point session if there is no session context (Dynarski: col. 4, lines 29-31, where if the mobile node did not previously communicate with the network access server then the PPP session is negotiated); and updating the point-to-point session if there is session context (Dynarski: col. 3, lines 33-41, where if the mobile node previously communicated with the network access server then the PPP session is updated).

10. Regarding claims 6, 13, 21, 31, and 37, Harper in view of Dynarski in further view of Madour discloses generating a table comprising an entry associated with the mobile node (Dynarski: col. 3, lines 63-col. 4, line 1, where the network access server stores a table containing an entry corresponding to a mobile node), the entry comprising a mobile node identifier and a previous access network identifier (Dynarski: col. 3, line 63-col. 4, line 1, where the table maps ISMI/ESN numbers, i.e. a mobile station identifier, to a particular port, i.e. a previous access network identifier field operable to store a previous access network identifier, see also col. 3, lines 22-32, where the ports correspond to respective base stations, i.e. "access network").

Harper in view of Dynarski in further view of Madour suggests that the table includes a current access network identifier. Harper in view of Dynarski in further view of Madour

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discloses that the PPP state is updated to reflect the move by the mobile unit (Dynarski: col. 3, lines 33-41). Harper in view of Dynarski in further view of Madour further discloses receiving the current access network identifier with the registration request (Madour: ¶ [0008]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the table include a current access network identifier to aid the system in updating the PPP state by having the current access network identifier and the previous access network identifier mapped to each other along with the mobile identification.

11. Regarding claims 7, 14, 22, and 38, Harper in view of Dynarski in further view of Madour discloses updating a tunnel connection operable to communicate a plurality of data packets between the current packet controller function and the packet data serving node by updating the entry associated with the mobile node (Harper: col. 4, lines 33-35, where the connection between the PCF and the PDSN, i.e. the "GRE tunnel," would be updated to reflect the changes to the PPP connection).

12. Regarding claims 8, 15, 23, 32, and 39, incorporating the rejection of claims 1, 9, 16, 26, 33, and 40, Harper in view of Dynarski in further view of Madour further discloses if the mobile is serviced by the simple Internet Protocol: determining whether a first Internet Protocol address associated with the mobile node is the same as a second Internet Protocol address associated with the mobile node, the first Internet Protocol address associated with a message received from the mobile node, the second Internet Protocol address stored at the packet data serving node (Harper: col. 3, lines 45-50); negotiating the point-to-point session, if the first Internet Protocol address is not the same as the second Internet Protocol address (Harper: col. 3, lines 45-50); and updating the point-to-point session, if the first Internet Protocol address is the same as the second

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Internet Protocol address (Harper: col. 3, line 45-50, where if the addresses are the same then the mobile node continues to use the same PDSN, so no re-negotiation is required).

13. Regarding claim 24, Harper in view of Dynarski in further view of Madour discloses that at least one of the packet controller functions is operable to: communicate with the at least one packet data serving node (Harper: col. 3, lines 25-27, where the PDSN interfaces to the BS through the PCF); and store an access network identifier identifying the at least one packet controller function (Madour: ¶ [0005], where the PCF corresponds to a BS, which in turn corresponds to a RAN, and ¶ [0008], where the RAN is identified by an access network identifier, such that the PCF is identified by an access network identifier, where it is suggested that the PCF store the access network identifier to enable communication between the PCF and the PDSN).

14. Regarding claim 25, Harper in view of Dynarski in further view of Madour discloses that the at least one packet data serving node is further operable to establish a tunnel connection to communicate between the at least one packet controller function and the at least one packet data serving node (Harper: col. 4, lines 33-35, where the connection between the PCF and the PDSN is known as "a GRE tunnel").

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hsu (USPN 6,987,764) see col. 8, line 51-col. 9, line 2, which teaches that the GRE tunnel is an tunnel over an IP network.

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16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J. Ryman
Examiner
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Daniel Ryman